TIP111 DARLINGTON TRANSISTOR (NPN)

TO-220C

1.BASE
2.COLLECTOR
3.EMITTER

FEATURES

- High DC Current Gain : h_{FE}=1000 @ V_{CE}=4V, I_C=1A(Min.)
- Low Collector-Emitter Saturation Voltage
- Industrial Use

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	2	A
P_C	Collector Dissipation	2	W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55 to +150	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=10mA,I_E=0	80			V
Collector-emitter sustaining voltage	$V_{CEO}^{(sus)}$	I_C=30mA,I_B=0	80			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10mA,I_C=0	5			V
Collector cut-off current	I_{CEO}	V_{CE}=40V,I_B=0			2	mA
Collector cut-off current	I_{CBO}	V_{CB}=80V,I_E=0			1	mA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			2	mA
DC current gain	$h_{FE(1)}$	V_{CE}=4V,I_C=1A	1000			
	$h_{FE(2)}$	V_{CE}=4V,I_C=2A	500			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=2A,I_B=8mA			2.5	V
Base-emitter voltage	V_{BE}	V_{CE}=4V,I_C=2A			2.8	V
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0,f=0.1MHz			100	pF